CAPITAL SUPPORT PERFORMANCE MEASURES

I. PROGRAM PERFORMANCE MEASURES FOR CAPITAL SUPPORT

A. Background

In December 1995, the Department submitted its REPORT TO THE LEGISLATURE ON CAPITAL SUPPORT PERFORMANCE MEASURES in response to supplemental report language in the 1995 Budget Act. This report proposed twelve measures for evaluating all major capital outlay support functions. The budget language stated that the proposed measures must provide an accurate measure of annual efficiency, provide a consistent basis for year-to-year comparison, and evaluate both the Department's cost and timeliness in completing work.

In the Department's three-tiered scheme of measures, these twelve capital support performance measures are **program** measures for the statewide Capital Outlay Support (COS) Program. Their relationship to **corporate** measures will be described later in this report.

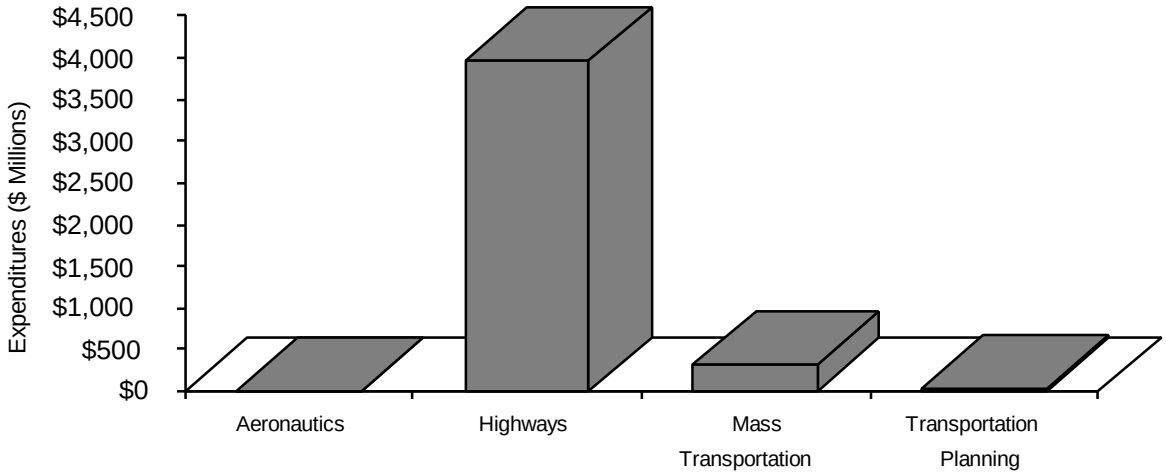
The purpose of this report is to summarize the status of the capital outlay support performance measures, report data for these measures for the past few years, where available, and recommend targets, where possible. Much data is involved in these measures from the project level to the department level. This report will address the measures only to the department level.

B. Context of Capital Support in the Department

Performance Measure #1 of the Report to the Legislature proposed "pie" charts showing PY and dollar expenditures for the Department's programs, the elements of the Highways program, and the parts of capital support. This is not a performance measure as such, but rather it sets the context for the other measures. For the purpose of this summary report, a few of these charts are shown to set the context.

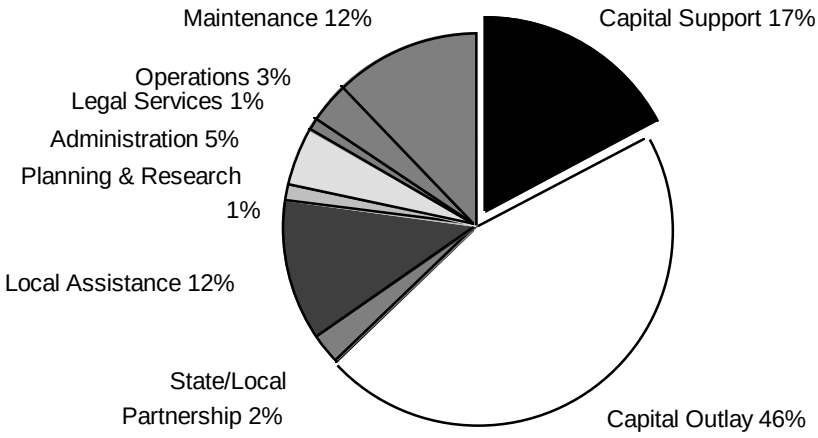
In FY 1995/96, total Caltrans expenditures were $4.35 billion of which $3.98 billion or 91% were Highways Program expenditures. The dominance of the Highways Program is shown in the following chart:

Expenditures on the four Caltrans Programs in 1995/96



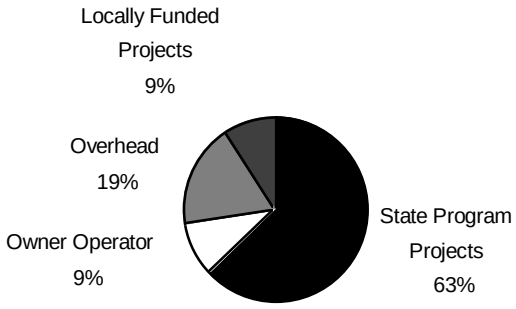
Of the $3.98 billion in Highways Program expenditures, capital support represents $690 million and capital outlay $1,812 million. The percentages for these and the other elements of the Highways Program are shown below:

Expenditures on Highway Program Elements During 1995/96



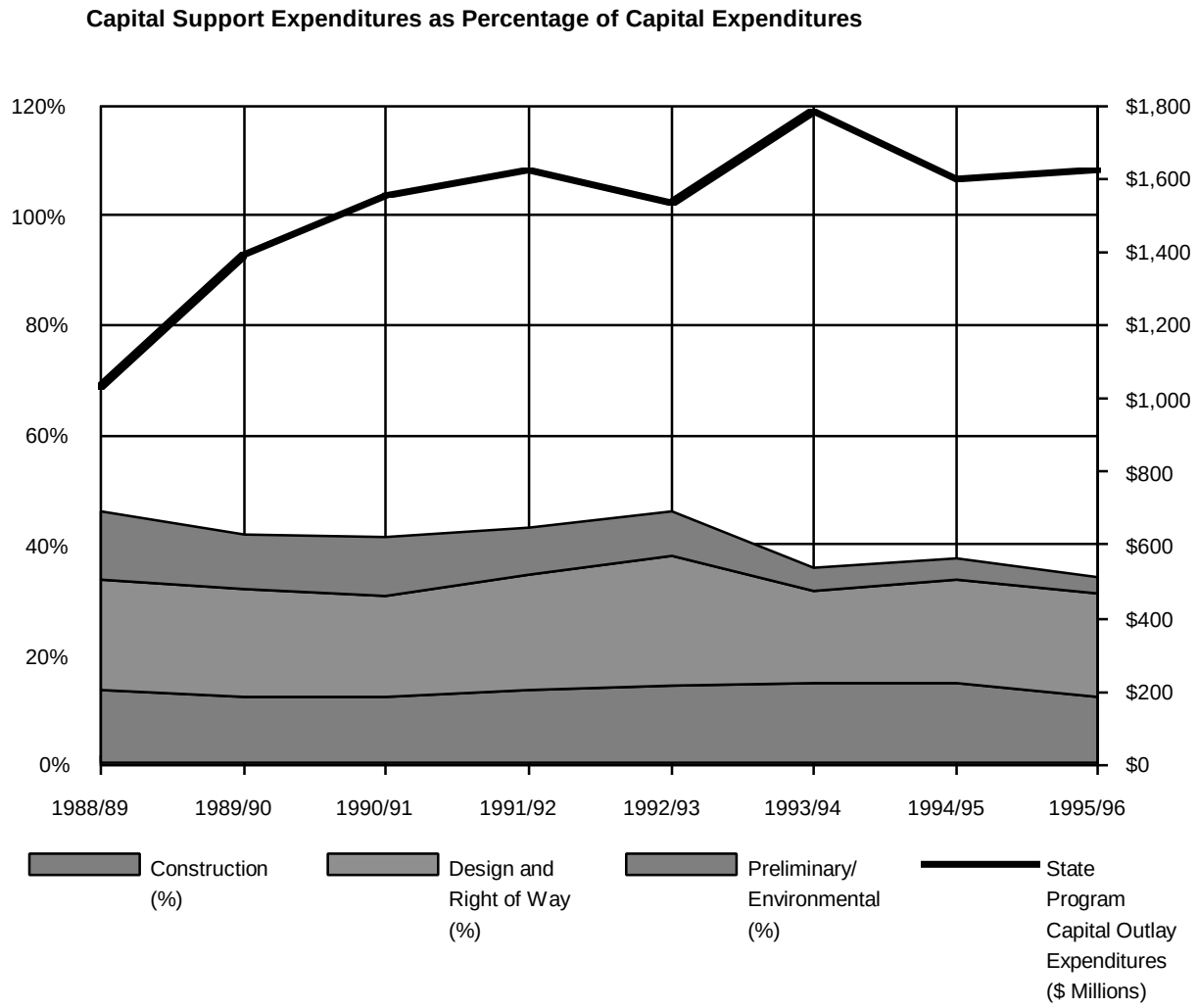
The percentage breakdown of the $690 million of capital support is shown below:

1995/96 Capital Support Expenditures by Activity Category



C. Relationship of Capital Support to Capital Outlay

Perhaps the most important and sensitive of all the capital support measures is the ratio of capital support to capital outlay. This is Performance Measure #2 in the Report to the Legislature. This relationship for each year from FY 1988/89 to 1995/96 is shown below. This shows a three-way breakdown of capital support and overall relationship to capital outlay dollars. The data for both capital support and capital outlay exclude expenditures on locally-funded projects. Capital support also excludes owner-operator services.



Target: Based on recent trends and Project Management Improvement efforts, the Project Management Program is recommending a goal of 33%.

It is important to note that the capital support and capital outlay expenditures represent different sets of projects at different times. Most capital support effort is expended on projects to be awarded in the future. Similarly, capital outlay is expended for projects developed in the past.

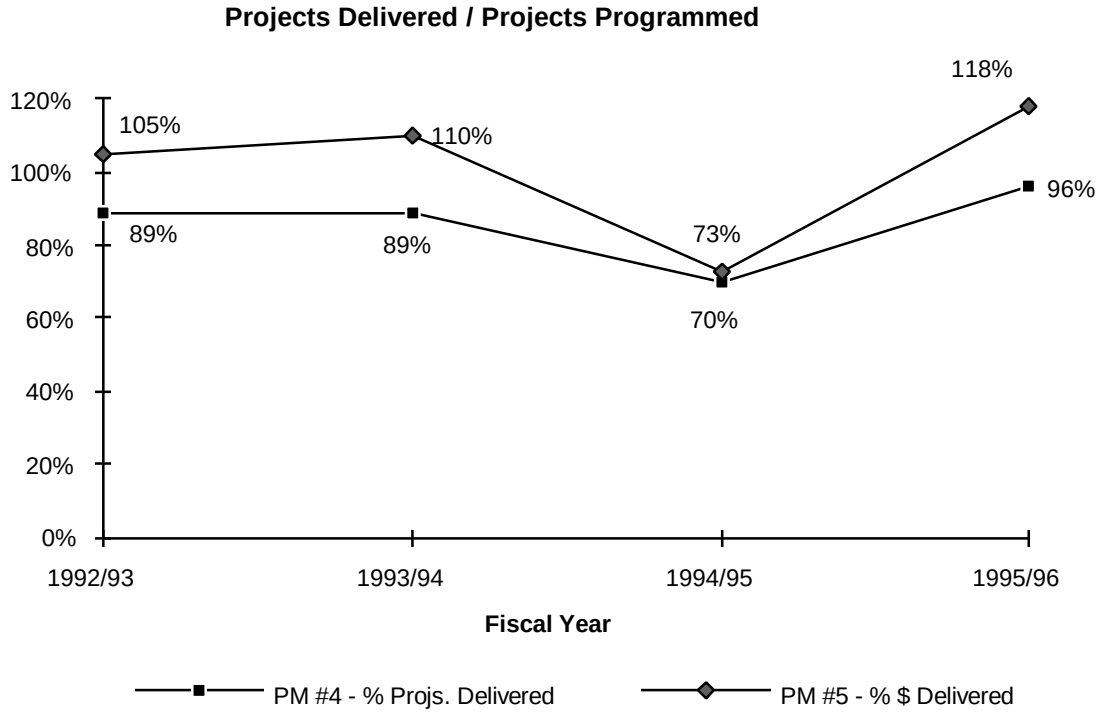
D. Quality Measure

Performance Measure #3 was proposed as a quality measure, to rate the final product at acceptance. While measuring quality will introduce subjectivity, complete measurement must include quality along with time and cost. This will entail development of a customer or stakeholder survey and a rating system. The

recent Peer Review Team recommended a standardized process for capturing customer satisfaction. We are pursuing assistance from the Survey Research Center at California State University, Chico in using focus groups to develop and test an instrument to measure customer satisfaction. The goal will be to complete development of an instrument by the end of the fiscal year so that it can be used in FY 1997/98.

E. Time Growth Measures

Performance Measures 4 and 5 measure the Department's success in completing the design of programmed projects within or ahead of schedule. PM #4 measures the ***number*** of programmed projects that are ready to list; PM #5 measures the ***dollar value***. Graphs for these two measures for recent years are shown below:

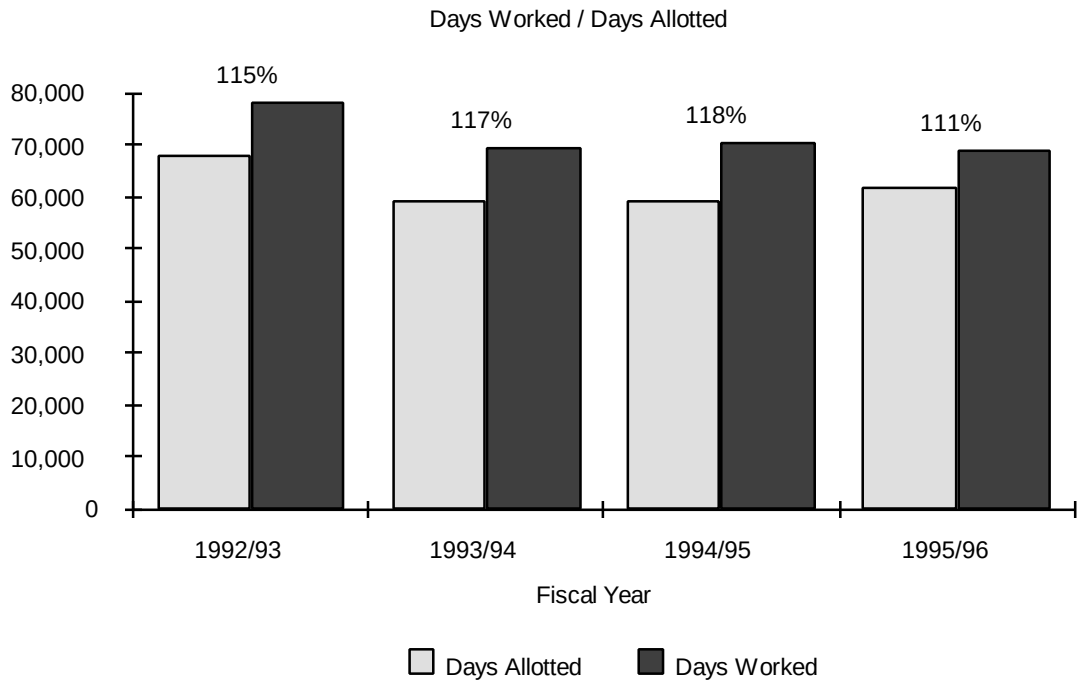


The performance measures for FY 1994/95 are notably lower than the other years shown. The principal reason for this was that there was not sufficient funding available for the STIP, SHOPP and TSM as programmed. Recognition of this led to the adoption of the eighteen month 1995 Allocation Plan extending from January 1995 to June 1996. Other factors contributing to the 1994/95 discrepancy were the CTC revising the reporting methodology to segregate programmed projects from emergency and

seismic retrofit projects, and the need to deliver emergency storm damage projects caused by the January and March 1995 storms. However, 1994/95 delivery utilized all available funding and $56 million of projects were placed on the shelf.

Targets: The above data suggest that the Department has had somewhat more success delivering programmed dollars than projects, and that slightly different goals might apply. The data suggest that in more normal years, not skewed by seismic or unusual numbers of emergency projects, 90% project delivery is possible and 100% or more dollar delivery is possible. Therefore, the Project Management Program recommends goals of at least 90% for PM #4 and at least 100% for PM #5.

Performance Measure #6 measures contract time during construction, excluding weather days, as a percentage of original allotted days at time of award. Recent performance for this measure is shown below:



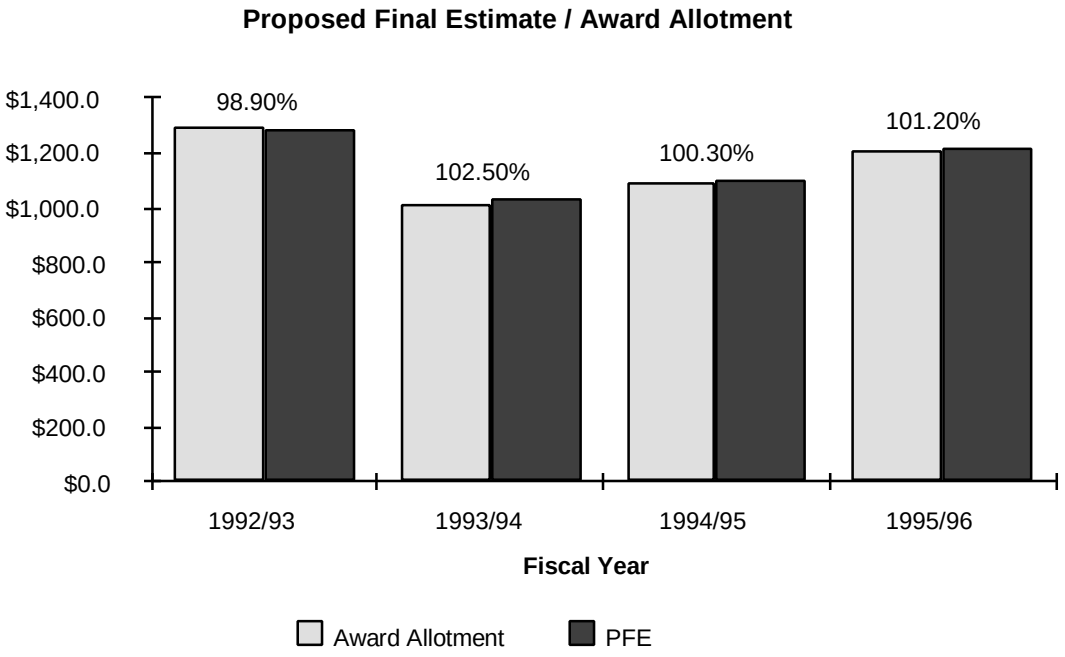
Target: While a goal of not greater than 100% might be the ideal state, actual experience would indicate that this is not realistic. A goal of not greater than 110% with continuous improvement is recommended.

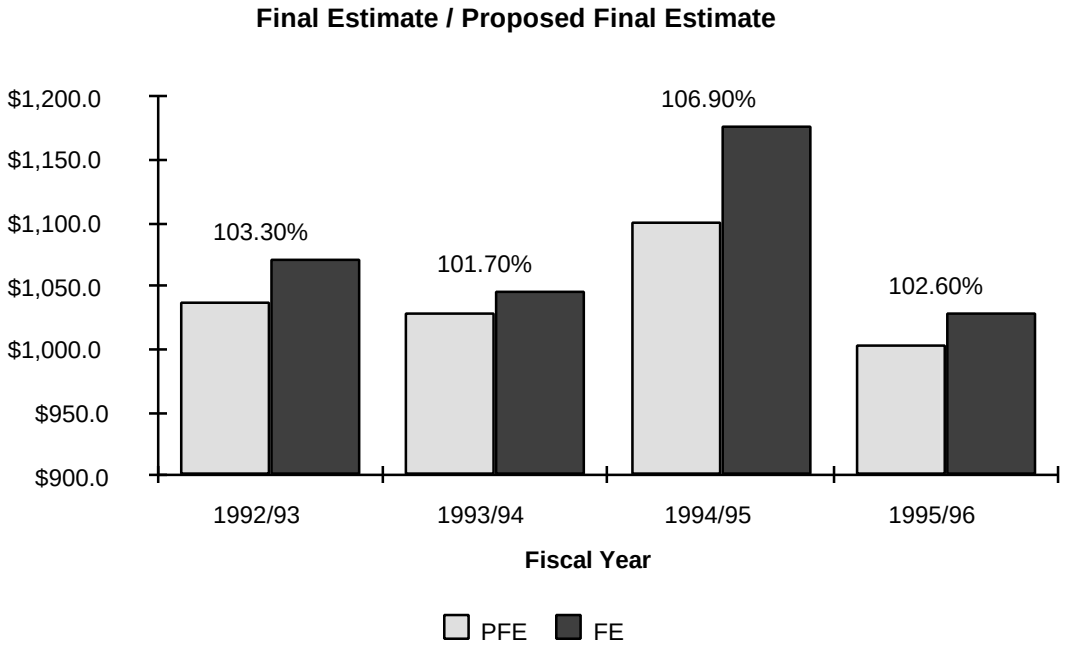
F. Capital Cost Growth Measures

Performance Measures 7, 8 and 9 address capital cost growth during project development and construction. PM #7 measures the Department's success in delivering projects within their programmed amount by expressing the **award** cost of programmed projects as a percentage of the amount programmed for those projects.

Currently available data is not reliable or accurate to track this measure historically. To correct this requires resolving the project identifier issue and developing a solid process for maintaining a continuing project inventory and tracking project costs across splits and combines. The current Single Project Identifier (SPI) Task Force is seeking approval of its recommendation to establish a SPI system. This system will provide the ability to initiate projects and track their identity as they either split into multiple projects or combine, establish relationships between projects and their funding in programming documents and expenditure authorizations in TRAMS, and report summarized project financial data. The goal is to have this available by July 1997.

Performance Measures 8 and 9 measure capital cost growth during construction. PM #8 measures the **proposed final estimate** (PFE) for projects completed in a particular year as a percentage of award allotment value of those projects. PM #9 measures the **final estimate** for projects finalized in a particular year as a percentage of the PFE of those projects. Performance for recent fiscal years is shown below:





Data for both of theses measures exclude projects with missing original allotment or PFE value.

Targets: Based on the above performance, goals of not greater than 100% are recommended for both PMs 8 and 9. However,

the primary factor in PM #9 is cost of claims which is not predictable.

G. Capital Delivery Measure

Performance Measure #10 was proposed to measure the dollar value of state program Construction and Right of Way capital encumbered in the current fiscal year, as a percentage of funds available. It was intended to be a measure of capital delivery and to coincide with information supplied to the California Transportation Commission on delivery. Instead, it is more a measure of using available funding. PM #5 has been supplied to the CTC as a delivery measure. Supplying PM #10 along with PM #5 would be confusing, and compiling reliable data presents some difficulties. Therefore, this measure has not been developed.

H. Support Cost Measures

Performance Measures 11 and 12 measure total support cost for programmed projects during project development and construction respectively. PM #11 measures Project Development and Right of Way work (Phases 0, 1 & 2) for projects **awarded** in the fiscal year, as a percentage of the total Project Development support cost programmed for those projects. PM #12 measures Construction support work (Phase 3) for projects with **PFE** in the fiscal year, as a percentage of the total Construction support cost programmed for those projects. There are no baseline data for these performance measures since there has been no system to track project splits and combines.

II. SUMMARY OF CAPITAL SUPPORT PERFORMANCE MEASURES

PM #	Description	Target	1995/96 Achievement
1	Capital Support in Context	None	Info Only
2	Support / Capital	< 33%	34%
3	Quality	TBD	Not available
4	Project Delivery (#)	> 90%	96%
5	Project Delivery ($)	> 100%	118%
6	Days Worked / Days Allotted	< 110%	111%
7	Award $ / Programmed $	< 100%	Not Available
8	PFE $ / Award $	< 100%	101%
9	FE $ / PFE $	< 100%	103%

10	Capital Delivery		Eliminated
11	Act. PjD Supp $ / Prog PjD Supp $		Not Available
12	Act. Const Supp $ / Prog Const Supp $		Not Available

III. RELATIONSHIP OF PROGRAM PERFORMANCE MEASURES TO DEPARTMENTAL PERFORMANCE MEASURES

During the process of developing **corporate** performance measures, it was decided that Caltrans' programs would supply *indicators* to the departmental measures. The Project Management Program provided five indicators for the corporate performance measure Project Delivery. Two of these indicators are supplied directly by program performance measures; one is a new measure; one is multiplicative composite of three program measures; and one is a weighted average of two program measures. This is summarized below:

Departmental Performance Measure - Project Delivery

Corporate Indicator	Capital Support Measure
Quality	COS PM #3--Rate Final Product
Time Growth	New measure: $\frac{\text{No. of projects completed}}{\text{No. of projects scheduled for completion}}$
Capital Cost Growth	PM #7 X PM #8 X PM #9 Or: $\frac{\$\text{Awd}}{\$\text{Prog}} \text{ X } \frac{\$\text{PFE}}{\$\text{Awd}} \text{ X } \frac{\$\text{FE}}{\$\text{PFE}} = \frac{\$\text{FE}}{\$\text{Prog}}$
Capital Delivery	COS PM #5: $\frac{\$\text{Value of projects delivered}}{\$\text{Value of projects programmed}}$
Support Cost	Weighted avg. of PM #11 and PM #12 Or: $\frac{\text{(Act Proj Dev Supp + Const Supp Costs)}}{\text{(Progr Proj Dev Supp + Const Supp Costs)}}$

Data used in the development of program Performance Measures 1 and 2 will be used by Corporate Administration to supply indicators for the corporate performance measure Managing Resources.

A. Quality Indicator

As stated previously, the survey and rating system envisioned for this measure will be developed in the latter half of this fiscal year.

B. Time Growth Indicator

A new measure is proposed to supply this indicator. This indicator will measure the number of projects scheduled for completion that were **completed** in the fiscal year or earlier, as a percentage of the total number of projects scheduled for completion in the fiscal year. This will measure the Department's ability to complete projects on or ahead of schedule. There is no baseline data for this. A baseline for FY 1997/98 will be developed by February 1997, and reporting will begin FY 1997/98.

The target or goal for this indicator should be at least 100%.

C. Capital Cost Growth Indicator

As shown above, this indicator will be a composite index formed by multiplying PMs 7, 8 and 9 resulting in an index that approximates final estimates to original programmed amounts. It will measure the Department's overall success in delivering projects within budget over the entire project life cycle. Since there is no reliable historical date for PM #7, this index cannot be computed currently.

It is important to emphasize that this is an index only since it involves different sets of projects for each component measure. However, over time, it can become an effective comparative measure of overall performance of estimating, programming and budgeting.

The target or goal for this indicator should be not greater than 100%.

D. Capital Delivery Indicator

As discussed previously, Performance Measure #5 is reported to the CTC as the measure of capital delivery. This measures the dollar value of projects delivered to the value of projects programmed. Or, put in other terms, it measures the Department's performance in completing the design of programmed projects within or ahead of schedule. Below are the percentage results for the following years:

FY 92/93	FY 93/94	FY 94/95	1995 Allo. Plan
105%	110%	73%	118%

The target or goal for this indicator should be at least 100%.

E. Support Cost Indicator

This indicator is a weighted average of Performance Measures 11 and 12 combining total support costs over Project Development, Right of Way and Construction. This measures the Department's overall success in keeping total support expenditures within project support budgets.

As mentioned in the discussion of Performance Measures 11 and 12, data for this indicator is dependent on a system to track project costs across splits and combines.

Similar to the Capital Cost Growth Indicator, it should be emphasized that two different sets of projects are involved in the component measures. This can also be an effective comparative measure over time as well as a measurement for continuous improvement.

The target for this indicator should be not greater than 100%, but data will have to be provided to support this.